SEQUENCE LISTING

<110> CREGG, JAMES M. LATHAM, JOHN LITTON, MARK SCHATZMAN, RANDALL TOLSTORUKOV, ILYA
<120> METHODS OF SYNTHESIZING HETEROMULTIMERIC POLYPEPTIDES IN YEAST USING A HAPLOID MATING STRATEGY
<130> 57015US (67824.701501)
<140> 10/577,074 <141> 2006-04-24
<150> PCT/US04/35302 <151> 2004-10-22
<150> 60/513,876 <151> 2003-10-22
<160> 16
<170> PatentIn Ver. 3.3
<210> 1 <211> 47 <212> DNA <213> Mus musculus
<400> 1 ccgctcgaga aaagagaggc tgaagctcag gtccagctgc agcagtc 4
<210> 2 <211> 41 <212> DNA <213> Mus musculus
<400> 2 tgggcccttg gtggaggctg aggagactgt gagagtggtg c 4
<210> 3 <211> 50 <212> DNA <213> Mus musculus
<400> 3 ccgctcgaga aaagagaggc tgaagctcaa attgttctca cccagtctcc 5
<210> 4 <211> 44 <212> DNA <213> Mus musculus

```
<400> 4
gacagatggt gcagccacag cccggtttat ttccaacttt gtcc
                                                                    44
<210> 5
<211> 38
<212> DNA
<213> Homo sapiens
ataagaatgc ggccgctcat ttacccggag acagggag
                                                                    38
<210> 6
<211> 41
<212> DNA
<213> Homo sapiens
<400> 6
gcaccactct cacagtctcc tcagcctcca ccaagggccc a
                                                                    41
<210> 7
<211> 32
<212> DNA
<213> Homo sapiens
<400> 7
tgcggccgct catgggcacg gtgggcatgt gt
                                                                    32
<210> 8
<211> 39
<212> DNA
<213> Homo sapiens
ataagaatgc ggccgctaac actctcccct gttgaagct
                                                                    39
<210> 9
<211> 44
<212> DNA
<213> Homo sapiens
<400> 9
ggacaaagtt ggaaataaac cgggctgtgg ctgcaccatc tgtc
                                                                   44
<210> 10
<211> 212
<212> PRT
<213> Homo sapiens
<400> 10
Ile Val Leu Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Pro Gly Glu
```

Lys Val Thr Met Thr Cys Ser Ala Ser Ser Ser Val Ser Tyr Met Asn 20 25 30

Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys Arg Trp Ile Tyr Asp 35 40 45

Thr Ser Lys Leu Ala Ser Gly Val Pro Ala His Phe Arg Gly Ser Gly 50 55 60

Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Gly Met Glu Ala Glu Asp 65 70 75 80

Ala Ala Thr Tyr Tyr Cys Gln Gln Trp Ser Ser Asn Pro Phe Thr Phe
85 90 95

Gly Ser Gly Thr Lys Leu Glu Ile Asn Arg Ala Val Ala Ala Pro Ser 100 105 110

Val Phe Ile Phe Pro Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala 115 120 125

Ser Val Val Cys Leu Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val 130 135 140

Gln Trp Lys Val Asp Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser 145 150 155 160

Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr 165 170 175

Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys 180 185 190

Glu Val Thr His Gln Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn 195 200 205

Arg Gly Glu Cys 210

<210> 11

<211> 321

<212> DNA

<213> Mus musculus

<400> 11

caaattgttc tcaccagtc tccagcaatc atgtctgcat ctccagggga gaaggtcacc 60 atgacctgca gtgccagct aagtgtaagt tacatgaact ggtaccagca gaagtcaggc 120 acctcccca aaagatggat ttatgacaca tccaaactgg cttctggagt ccctgctcac 180 ttcaggggca gtgggtctgg gacctcttac tctctcacaa tcagcggcat ggaggctgaa 240 gatgctgcca cttattactg ccagcagtgg agtagtaacc cattcacgtt cggctcgggg 300 acaaagttgg aaataaaccg g

<210> 12

<211> 321

<212> DNA

<213> Homo sapiens

<400> 12

gctgtggctg caccatctgt cttcatcttc ccgccatctg atgagcagtt gaaatctgga 60 actgcctctg ttgtgtgcct gctgaataac ttctatccca gagaggccaa aqtacaqtqq 120 aaggtggata acgccttca atcgggtaac tcccaggaga gtgtcacaga gcaggacagc 180 aaggacagca cctacagcct cagcagcacc ctgacgctga gcaaagcaga ctacgagaaa 240 cacaaagtet aegeetgega agteaeceat cagggeetga getegeeegt cacaaagage 300 ttcaacaggg gagagtgtta g <210> 13 <211> 449 <212> PRT <213> Homo sapiens <400> 13 Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Ala Arg Pro Gly Ala Ser Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Arg Tyr Thr Met His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile Gly Tyr Ile Asn Pro Ser Arg Gly Tyr Thr Asn Tyr Asn Gln Lys Phe Lys Asp Lys Ala Thr Leu Thr Thr Asp Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Ala Arg Tyr Tyr Asp Asp His Tyr Cys Leu Asp Tyr Trp Gly Gln Gly 105 Thr Thr Leu Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu 135 Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu 165 170 175 Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser 185 Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro Lys Ser Cys Asp Lys

215

Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro 230 235 Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser 250 Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn 280 Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu 310 Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr 340 345 Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr 360 Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu 390 395 Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu 425

Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly

Lys

<210> 14 <211> 1350 <212> DNA <213> Homo sapiens

435

<400> 14

caggiccage igeageagic iggggetgaa etggeaagae etggggeete agigaagaig 60 teetgeaagg ettetggeta eacettiaet aggiacaega igeaetgggi aaaacagagg 120 eetggacagg gietggaatg gatiggatae attaateeta geegiggita taetaattae 180 aateagaagi ieaaggacaa geeaeatig actacagaea aateeteeag eacageetae 240 atgeaaetga geageetgae ateigaggae teigeagiet attaetgige aagatattat 300 gatigateatt aetgeetiga etaetggge eaaggeaeea eteicaeagi eteeteagee 360

```
tccaccaagg gcccatcggt cttccccctg gcaccctcct ccaagagcac ctctgggggc 420
acagcggccc tgggctgcct ggtcaaggac tacttccccg aaccggtgac ggtgtcgtgg 480
aactcaggcg ccctgaccag cggcgtgcac accttcccgg ctgtcctaca gtcctcagga 540
ctctactccc tcagcagcgt ggtgaccgtg ccctccagca gcttgggcac ccagacctac 600
atctgcaacg tgaatcacaa gcccagcaac accaaggtgg acaagaaagt tqaqcccaaa 660
tettgtgaca aaacteacac atgeeceaceg tgeecageac etgaacteet ggggggaceg 720
tcagtcttcc tcttcccccc aaaacccaag gacaccctca tgatctcccg gacccctgag 780
gtcacatgcg tggtggtgga cgtgagccac gaagaccctg aggtcaagtt caactggtac 840
gtggacggcg tggaggtgca taatgccaag acaaagccgc gggaggagca gtacaacagc 900
acgtaccgtg tggtcagcgt cctcaccgtc ctgcaccagg actggctgaa tggcaaggag 960
tacaagtgca aggtetecaa caaageeete ecageeecca tegagaaaac catetecaaa 1020
gccaaagggc agccccgaga accacaggtg tacaccctgc ctccatcccg ggatgagctg 1080
accaagaacc aggtcagcct gacctgcctg gtcaaaggct tctatcccag cgacatcgcc 1140
gtggagtggg agagcaatgg gcagccggag aacaactaca agaccacgcc tcccgtgctg 1200
gactccgacg gctccttctt cctctatagc aagctcaccg tggacaagag caggtggcag 1260
caggggaacg tetteteatg etcegtgatg catgaggete tgeacaacea etacaegeag 1320
aagagcctct ccctgtctcc gggtaaatga
<210> 15
<211> 1350
<212> DNA
<213> Homo sapiens
<400> 15
caggiccage tgcagcagic tggggctgaa ctggcaagac ctggggcctc agigaagatg 60
tcctgcaagg cttctggcta cacctttact aggtacacga tgcactgggt aaaacagagg 120
cctggacagg gtctggaatg gattggatac attaatccta gccgtggtta tactaattac 180
aatcagaagt tcaaggacaa ggccacattg actacagaca aatcctccag cacagcctac 240
atgcaactga gcagcctgac atctgaggac tctgcagtct attactgtgc aagatattat 300
gatgatcatt actgeettga etactgggge caaggeacea eteteacagt etecteagee 360
tccaccaagg gcccatcggt cttccccctg gcaccctcct ccaagagcac ctctgggggc 420
acageggeee tgggetgeet ggteaaggae tactteeeeg aaceggtgae ggtgtegtgg 480
aactcaggcg ccctgaccag cggcgtgcac accttcccgg ctgtcctaca gtcctcagga 540
ctctactccc tcagcagcgt ggtgaccgtg ccctccagca gcttgggcac ccagacctac 600
atctgcaacg tgaatcacaa gcccagcaac accaaggtgg acaagaaagt tgagcccaaa 660
tettgtgaca aaactcacac atgcccaccg tgcccagcac ctgaactcct ggggggaccg 720
tcagtcttcc tcttcccccc aaaacccaag gacaccctca tgatctcccg gacccctgag 780
gtcacatgcg tggtggtgga cgtgagccac gaagaccctg aggtcaagtt caactggtac 840
gtggacggcg tggaggtgca taatgccaag acaaagccgc gggaggagca gtacaacagc 900
gcctaccgtg tggtcagcgt cctcaccgtc ctgcaccagg actggctgaa tggcaaggag 960
tacaagtgca aggtctccaa caaagccctc ccagccccca tcgagaaaac catctccaaa 1020
gccaaagggc agccccgaga accacaggtg tacaccctgc ccccatcccg ggatgagctg 1080
accaagaacc aggtcagcct gacctgcctg gtcaaaggct tctatcccag cgacatcgcc 1140
gtggagtggg agagcaatgg gcagccggag aacaactaca agaccacgcc tcccgtgctg 1200
gactccgacg gctccttctt cctctatagc aagctcaccg tggacaagag caggtggcag 1260
caggggaacg tetteteatg etcegtgatg catgaggete tgeacaacea etacaegeag 1320
aagagcctct ccctgtctcc gggtaaatga
                                                                  1350
<210> 16
<211> 699
<212> DNA
<213> Homo sapiens
<400> 16
caggtccagc tgcagcagtc tggggctgaa ctggcaagac ctggggcctc agtgaagatg 60
tectgeaagg ettetggeta cacetttaet aggtacaega tgeaetgggt aaaaeagagg 120
```

					سد. 517 م	a
			7			
cctggacagg	gtctggaatg	gattggatac	attaatccta	gccgtggtta	tactaattac	180
aatcagaagt	tcaaggacaa	ggccacattg	actacagaca	aatcctccag	cacagcctac	240
atgcaactga	gcagcctgac	atctgaggac	tctgcagtct	attactgtgc	aagatattat	300
gatgatcatt	actgccttga	ctactggggc	caaggcacca	ctctcacagt	ctcctcagcc	360
tccaccaagg	gcccatcggt	cttccccctg	gcaccctcct	ccaagagcac	ctctgggggc	420
acagcggccc	tgggctgcct	ggtcaaggac	tacttccccg	aaccggtgac	ggtgtcgtgg	480
aactcaggcg	ccctgaccag	cggcgtgcac	accttcccgg	ctgtcctaca	gtcctcagga	540
ctctactccc	tcagcagcgt	ggtgaccgtg	ccctccagca	gcttgggcac	ccagacctac	600
				acaagaaagt	tgagcccaaa	660
tcttgtgaca	aaactcacac	atgcccaccg	tgcccatga			699

.